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New York Island to show the topography in 1776 as contrasted with the present, and a model of the Catskills, in which the vertical and horizontal scale being the same, the exact features were reproduced. In the department of physics a number of pieces of apparatus were exhibited from Columbia University, to show the latest advances in laboratory investigations and materials therefor. The stremmatograph, and records of results obtained on the Boston and Albany Railroad, exhibited by Mr. P. H. Dudley, attracted an unusual amount of interest. The last exhibit, at the end of the hall, was in electricity, and included a number of new pieces of apparatus from Columbia University and elsewhere, among which should be mentioned an induction coil with thirty-inch spark, and apparatus illustrating the Marconi system of transmitting signals to a distance without wire.

The amount of interest that has been awakened by the annual receptions and exhibitions in New York City is very large, and has increased greatly within the last year. We all feel that such an exhibit is a most helpful way in which to bring the knowledge of science before the people, and the appreciative interest of the visitors has proved an inspiration even to the most skeptical. The annual exhibition of the Academy has come to be looked upon as one of the scientific events of the year by the inhabitants of New York scientifically interested, and will undoubtedly be repeated each spring indefinitely.

RICHARD E. DODGE.

#### CURRENT NOTES ON BOTANY.

##### A NEW PLANT CATALOGUE.

MR. A. A. HELLER, of the University of Minnesota, has compiled what must prove to be a most useful catalogue of the higher plants (Pteridophytes and Spermatophytes) of North America north of Mexico.

It is the first attempt at making such a catalogue under the 'Rochester and Madison Rules' and following the Eichler sequence of families, and for this reason is of more than ordinary interest. It is moreover the first catalogue of the plants of North America prepared by a working botanist.

There are 14,534 entries with a few duplicated numbers, which may increase the whole number by fifty or seventy-five more. Of this vast number more than 14,000 are flowering plants proper, there being 263 ferns and fern-allies and 112 gymnosperms. The largest families are Compositæ (exclusive of Cichoriaceæ, 146) with 2149 species; Papilionaceæ 1095, with 129 in the closely related Cæsalpiniaceæ and Mimosaceæ; Gramineæ, 938; Cyperaceæ, 724. The larger genera are *Carex* with 431 species; *Astragalus*, 252; *Eriogonum*, 184; *Aster*, 157; *Erigeron*, 137; *Solidago*, 114. We learn also that there are 15 North American palms, and 210 orchids.

#### BIBLIOGRAPHICAL DIFFICULTIES IN BOTANY.

DR. E. L. GREENE prints, in a recent number of the *Catholic University Bulletin*, a thoughtful discussion of some of the troubles which confront the systematic botanists. In it he makes some pertinent remarks upon the importance of nomenclatural accuracy in science: "There is, of course, no science without its nomenclature and terminology. And in botany nothing can be done, at least no results of research can be communicated, apart from the names of the plants or groups of plants which have been under investigation. Just as the correct and full and true name of any man is a kind of necessity of his existence as a member of society, so the name of the family, of the genus and of the species to which any tree or shrub or herb belongs is indispensable to a scientific, or, indeed, any kind of understanding and discussion of it."

\* \* "Botanical nomenclature means, or ought to mean, the same name for the same group of plants, for all botanists of whatever language or nation. This is agreed to by all. And it is in a general way as universally conceded that, under certain limitations, and with important exceptions, the scientific name of every plant species is determined by the principle of priority of publication."

Dr. Greene then states precisely three important and fundamental nomenclatural principles, as follows: "(1) The employment of Latin as the language of plant names; (2) priority of publication, and (3) the binary character of all species names as being made up of a genus name of one term and a species name of one term." A plant is, therefore, to bear the oldest published Latin generic name of one term, combined with its earliest published Latin specific name of one term. These rules, while plain and evidently just, involve many difficulties in their application. Thus it happens that it is often difficult to determine what are the limits of many of the Linnæan genera as given in the 'Species Plantarum' of 1753, on account of the fact that Linnæus often compiled without critical examination. In the course of his discussion Dr. Greene suggests the advisability of taking Tournefort's 'Institutiones' of 1700 as the starting point for the genera of plants.

In regard to specific names much confusion has arisen on account of the insufficiency of so many of the Linnæan descriptions, and this can be helped in many cases only by a careful study of the earlier botanical authors, Dodonæus, Ray, Bauhin, Clusius, Plukenet, Micheli, Dillenius, Haller, Le Vaillant and Gronovius. "Just as the master of Latin philology must have close acquaintance with each one of the ancient Latin authors, so should every botanical scholar who would per-

fectly understand Linnæus be somewhat philologically familiar with every one of those standard pre-Linnæan authors to whose descriptions of plants Linnæus refers us on every page of his."

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#### CURRENT NOTES ON PHYSIOGRAPHY.

##### GEOGRAPHY OF INDIAN TERRITORY.

A THESIS presented to the Department of Geology of Stanford University by N. F. Drake on 'A Geological Reconnaissance of the Coal Fields of the Indian Territory' (Proc. Am. Phil. Soc., XXXVI., 1897, 326-419, map) contains a number of geographical notes on a little known district. The Ouachita mountain system extends into the territory south of the Arkansas and Canadian rivers, repeating the features described in Arkansas by Griswold; sharp monoclinal ridges on close folded structures, and flat-topped mountains, often synclinal in structure, where the folds are more open; all with an east and west trend, and contributing to the western extension of Appalachian-like disturbance and topography, as explained by Branner (*Amer. Jour. Sci.*, November, 1897). A plateau with broad uplands and narrow valleys enters from the Ozark region on the northeast as far as the Grand and Arkansas rivers; repeating the features described for Missouri by Marbut (*SCIENCE*, V., 20), the 'Boston mountains,' a plateau with ragged promontories and outliers presenting the strongest relief in this division. The Great Plains enter from the northwest into the angle between the Grand and Canadian rivers; an extended area of moderate relief, descending gently eastward, and here and there falling in terrace-like escarpments, 50 to 100 feet high, as the harder strata are passed; thus repeating features so well described by the University of Kansas Survey on the North (*SCIENCE*, V., 945).